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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/844,401

04/27/2001

Ernest C. Chen

PD-200181

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01/08/2004

HUGHES ELECTRONICS CORPORATION
PATENT DOCKET ADMINISTRATION RE/R11/A109
P O BOX 956
EL SEGUNDO, CA 90245-0956

EXAMINER

BAYARD, EMMANUEL

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 01/08/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/844,401

Applicant(s)

CHEN, ERNEST C.

Examiner

Emmanuel Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-3, 5-6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1-54 are rejected under 35 U.S.C. 102(e) as being anticipated by Arslan et al U.S.

Patent No 6,574,235 B1.

As per claims 1, 12, 21, 38 Arslan et al discloses layered signal for transmitting data, comprising: a first information sequence is considered as the claimed (first signal layer including a first carrier and first signal symbols for a first digital signal transmission) (see figs, 1, 4A-4D element S1 and col.2, lines 15-67 and col.4, lines 65-67 and col.5, lines 29-35); and second baseband is considered as the claimed (second signal layer) including a second carrier and second signal symbols for a second signal transmission disposed on the first signal layer (see figs. 4A-4D elements SEQ 2A-2D); wherein the layered signal has the first carrier demodulated (see figs. 4B, 4D elements 101B, 101D and col.10, lines 60--67) and first layer signal decoded (see figs. 4B, 4D

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elements 102B, 102D and col.10, lines 63-67 and col.11, line 40) to produce the first signal symbols for a first layer transport, the first signal symbols are remodulated and subtracted (see figs. 4B, 4D elements 107B, 107D and col.8, lines 25-30 and col.10, line 61 and col.12, lines 5-7) from the layered signal to produce the second signal layer, and the second signal layer has the second carrier demodulated (see figs. 4B, 4D elements 109B, 109D) and decoded (see figs.4B, 4D elements 110B, 110D) to produce the second signal symbols (SEQ 2D) for a second layer transport.

As per claims 2, 13, 26, 43, Arslan inherently includes wherein at least one of the first and second signal layers are quadrature phase shift keyed (QPSK).

As per claims 3, 14, 27, 44, Arslan inherently includes wherein a code rate for at least one of the first and second signal layers is $6/7$.

As per claims 4, 15, 28, 45, Arslan inherently includes, wherein a code rate for at least one of the first and second signal layers is $2/3$.

As per claims 5, 16, 29, 46, Arslan inherently includes, wherein a code rate for at least one of the first and second signal layers is $1/2$.

As per claims 6, 17, 30, 47, Arslan inherently includes, wherein the second signal layer is generated by power boosting a legacy signal.

As per claims 7, 18, 31, Arslan inherently includes, wherein a total code and noise level of the second signal layer is no greater than a noise floor of the first signal layer.

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As per claims 8, 19, 32, 49, Arslan inherently includes, wherein at least one of the first and second signal layers are coded using a turbo code.

As per claims 9, 20, 33, 50, Arslan inherently includes, wherein both the first and second signal layers are coded using a single turbo code.

As per claims 10, 34, 51, Arslan inherently includes, wherein the first and second layer each have a frequency that is substantially similar.

As per claims 11, 35, 52, Arslan inherently includes, wherein the first and second layer each have a frequency with a frequency offset therebetween.

As per claim 22, Arslan includes wherein the first layer signal includes the first carrier and is subtracted from the received signal before the first carrier is demodulated (see figs. 4A-4B).

As per claim 23, Arslan inherently includes wherein the first layer signal does not include the first carrier and is subtracted from the received signal after the first carrier is demodulated.

As per claim 24, Arslan inherently includes a non-linear distortion map for removing non-linear distortion effects from the first signal layer.
of the second signal

As per claims 36, 53 Arslan inherently includes a Viterbi decode.

As per claims 37, 54 Arslan inherently includes a Reed-Solomon decode.

As per claim 39, Arslan inherently includes wherein the first layer signal includes the first carrier and is subtracted from the received signal before the first carrier is demodulated (see figs. 4A-4B).

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As per claim 40, Arslan inherently includes wherein the first layer signal does not include the first carrier and is subtracted from the received signal after the first carrier is demodulated (see figs. 4A-4B).

As per claim 41, Arslan inherently includes a non-linear distortion map for removing non-linear distortion effects from the first signal layer produced by the remodulator.

As per claim 42, Arslan inherently includes wherein the first layer of the received signal is a boosted legacy signal.

As per claim 43, Arslan inherently includes wherein at least one of the first and second signal layers are quadrature phase shift keyed (QPSK).

As per claim 48, Arslan inherently includes wherein a total code and noise level of the first signal layer is no greater than a noise floor of the second signal layer.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Holf U.S. Patent No 5,467,197 teaches a dual communication.

Raith et al U.S. Patent No 6,266,534 B1 teaches a system and methods for locating remote terminals.

Cupo U.S. Patent No 4,800,573 teaches an equalizer arrangement.

Hartson et al U.S. Patent No 6,433,835 B1 teaches an expanded information capacity.

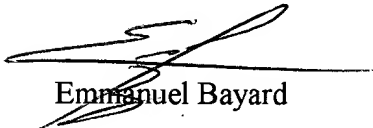
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Knutson et al U.S. Patent No 6,597,750 B1 teaches an opposite polarization..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is (703) 308-9573. The examiner can normally be reached on Monday-Thursday from 8:00 AM - 5:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour , can be reached on (703) 306-3034. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.



Emmanuel Bayard

Primary Examiner

January 6, 2004